

Claims 1-10 (cancelled)

Claim 11 (new): A method for the preparation of a cross-linked hydrophilic coating of a hydrophilic polymer on a substrate polymer surface of a medical device, said method comprising the steps of:

- (i) providing a medical device comprising a substrate polymer having the substrate polymer surface,
- (ii) providing a polymer solution comprising 1-20% by weight of a hydrophilic polymer, 0-5% by weight of additive(s), and the balance of a vehicle with plasticizing effect on the hydrophilic polymer, said vehicle comprising at least one plasticizer having a solubility in water of at least 6 g/L, a boiling point above 210°C at 760 mmHg, and a Hansen δ_H parameter of less than 20,
- (iii) applying said polymer solution to said substrate polymer surface,
- (iv) evaporating at least a part of the vehicle from said polymer solution present on said substrate polymer surface, and curing said hydrophilic polymer.

Claim 12 (new): The method according to claim 11, wherein the polymer solution is applied to said substrate polymer surface in one single application step.

Claim 13 (new): The method according to claim 11, wherein the vehicle comprises at least one solvent.

Claim 14 (new): The method according to claim 13, wherein the polymer solution consists of:

1-20% by weight of the hydrophilic polymer,

0-5% by weight of additive(s),
1-40% by weight of plasticizer(s), and
50-95% by weight of solvent(s).

Claim 15 (new): The method according to claim 11, wherein the substrate polymer is polyurethane.

Claim 16 (new): The method according to claim 11, wherein the hydrophilic polymer is polyvinyl pyrrolidone.

Claim 17 (new): A medical device comprising a substrate polymer surface having thereon a cross-linked hydrophilic coating of a hydrophilic polymer, said medical device being obtainable by the method of claim 11.

Claim 18 (new): A medical device comprising a hydrophilic coating of a cross-linked hydrophilic polymer, said coating comprising a hydrophilic plasticizer having a solubility in water of at least 6 g/L, a boiling point above 210°C at 760 mmHg, and a Hansen δ_H parameter of less than 20.

Claim 19 (new): The medical device according to a medical device comprising a hydrophilic coating of a cross-linked hydrophilic polymer, said coating comprising a hydrophilic plasticizer having a solubility in water of at least 6 g/L, a boiling point above 210°C at 760 mmHg, and a Hansen δ_H parameter of less than 20, which is prepared according to the method of claim 11.

Claim 20 (new): Use of a polymer solution for the preparation of a cross-linked hydrophilic coating, said polymer solution comprising 1-20% by weight of a hydrophilic polymer, 0-5% by weight of additive(s), and the balance of a vehicle with plasticizing effect on the hydrophilic polymer, said vehicle

comprising at least one plasticizer having a solubility in water of at least 6 g/L, a boiling point above 210°C at 760 mmHg, and a Hansen δ_H parameter of less than 20.

Claim 21 (new): The method according to claim 15, wherein the hydrophilic polymer is polyvinyl pyrrolidone.